

ILLINOIS COMMERCE COMMISSION  
TELECOMMUNICATIONS DIVISION STAFF REPORT

June 25, 1998

Subject: Staff Report as directed in the Commission Order in Dockets 97-0192/97-0211.

Summary:

This Staff Report is presented to comply with the 45 day report period directed by the Commission in the Final Order. Staff, based on the premise that all outstanding pleadings filed in Dockets 97-0192/97-0211 after the close of the record will be denied, recommends an investigation be made of; 1) the compliance by all companies with respect to the conservation measures in the Final Order in Docket 97-0192/97-0211; and 2) the specific irreversible action that begins an overlay implementation. and when that action will occur.

In support of the recommendations Staff addresses three primary issues -- number conservation measures, the irreversible action that begins an overlay implementation, and the important history and role of the Illinois Commerce Commission in area code relief.

The number conservation measures section includes a status report and related information regarding compliance. The section on irreversible action includes the need to identify and understand the specific action starts the implementation of an Overlay. The area code relief section includes a history and describes local number portability (LNP), number pooling and its progress, and other numbering efforts.

The three appendices to the report are; A) the definition of terms used in the report, B) the list of parties Staff recommends be noticed in the recommended investigation; C) the data requests Staff recommends be issued in the investigation and a proposed schedule

The area code overlay implementation can only be delayed for as long as the number conservation measures cause the inventory of NXX codes and the inventory of thousand blocks to exceed the demand for them. The return of codes and blocks by current code holders to the number administrator (codes) and the pooling administrator (blocks) is critical to increasing the inventory. Demand for codes and blocks appears to keep pace with the reported increased inventory. More inventory information on blocks will be available July 8, 1998, from the pooling administrator. Unless a relatively large quantity of codes and blocks is returned, it appears any delay will not be very long. Staff is recommending the specific data requests in Appendix D so the return of codes and blocks can be shown to be in compliance with the Commission's order.

Introduction:

The Chicago metropolitan area had one area code - 312 - until 1989 when the suburban area was changed to 708. Five years later, Illinois Bell Telephone Company, the Number

Administrator notified the ICC of the need for additional codes<sup>1</sup> in the growing suburban areas, driven by growth and expanded use of communications devices such as cellular phones and pagers. The Number Administrator proposed a “wireless overlay” i.e., all new wireless devices issued would not necessarily have the same area code as their owner had at home or work. Wireless companies filed a complaint with the FCC claiming this approach was anticompetitive. The FCC agreed in February 1995. Facing exhaust, and in response in part, to appeals by municipalities to maintain the geographic identity associated with area codes, the ICC ordered the creation of the 847 area code for the north suburbs, 639 for the west, retaining 708 for the south. These splits were implemented in 1996 and were projected at the time to last until at least 2004. Months after the ICC ordered the new codes for the suburbs, the Number Administrator announced the need for a new code in the city of Chicago. Through a stipulated settlement, the ICC approved the 773 code for the area outside the central business district which retained 312. This split was also implemented in 1996.

In May 1997, only a year and a half after the 847 code was implemented, the Number Administrator announced a forecasted exhaust in 1998. The Commission immediately initiated a new docket to review the split and all-service overlay options proposed by the Number Administrator. This time, in addition to the explosive demand for new devices and second lines, the number of new companies entering the varied telecommunications markets, including the new market for local service, was cited as reasons for the accelerated exhaust forecast. The Citizens Utility Board cited the proliferation of companies and alleged hoarding of numbers as the primary problem and called for number pooling to be implemented, in effect reducing the minimum block of numbers allocated to a company from 10,000 to 1,000. In May 1998 the Commission ordered additional number conservation measures and number pooling as ways to delay the when a new code was required for the 847 area. The Commission also ordered an all-services overlay (versus another split) when exhaust occurs even after number conservation measures were implemented. All-services overlay affects only new numbers. It also requires 11-digit dialing for all calls within today’s 847 area. The Commission’s May 11, 1998 Order called for reports from the Number administrator, CUB and the Commission Staff within 45 days of the order. The Number Administrator filed its initial report (dated May 14, 1998) on May 18, 1998. A May 29, 1998 response to a rehearing petition, Ameritech provided additional information. Then the Number Administrator’s official Updated Report (dated June 19, 1998) was filed June 19, 1998. CUB did not file a report, but did reference some data in a joint petition for rehearing. This document is Staff’s first report in response to the Order.

## I. Conservation Measures

### A. ICC Ordered Conservation Measures

The Commission's Order in this Docket imposed upon all carriers nine number conservation requirements for the 847, 773, 312, 708 and 630 NPAs. These nine requirements are listed below with references to information in the May 18, 1998 Status

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<sup>1</sup> See Appendix A for definitions used in this report.

Report by the Number Administrator, information in Ameritech's May 28, 1998 Response to Intervenor's Motion, and the June 19, 1998 Update Report of the Number Administrator.

(1) All carriers and paging companies that provide, or plan to provide, service in the 847 NPA were required to provide a code forecast to Wallace Datacom by December 3, 1997. The Number Administrator will not consider a code request from any carrier that has not previously provided a code forecast;

Status: No information is in the record of the area code docket to indicate the degree of compliance with this conservation measure. The May 29, 1998 Response states code requests will not be honored unless the forecast has been provided.

(2) Before being assigned an NXX code for growth, every code applicant is required to complete and deliver to the Number Administrator a Months to Exhaust Worksheet which identifies the number of telephone numbers the applicant has available for assignment in a rate center, how many numbers the applicant has used in the past six months and how many numbers the applicant projects to use in the next 12 months;

Status: No information is in the record of the area code docket to indicate the degree of compliance with this conservation measure. The May 29, 1998 Response states worksheets must be submitted and no assignment will be made without it.

(3) Applications for new NXX codes will not be accepted by the Number Administrator sooner than 90 days before they are required. Presumably, the Number Administrator will be able to make this determination from the Months to Exhaust Worksheet;

Status: No information is in the record of the area code docket to indicate the degree of compliance with this conservation measure. The May 29, 1998 Response states the assignment must be demonstrated, on the worksheet, to reach exhaust within 90 days.

(4) A code holder must file a Confirmation of Code Activation with the Number Administrator within 90 days after the code is activated. NXX codes not activated in a timely manner are subject to reclamation by the Number Administrator;

Status: No information is in the record of the area code docket to indicate the degree of compliance with this conservation measure. The May 29, 1998 Response states a Confirmation of Code must be filed within 90 after the code is activated. The June 19, 1998 Updated Report states all reports that are currently due have been filed.

NOTE: This measure, because it has to do with the return of idle, unused NXX codes is crucial to the continued life of the 847 NPA. Staff recommends

requesting the Number Administrator to report, by wireline and wireless, the quantity of codes the Number Administrator has recalled since the jeopardy was declared in the 847 NPA. Staff also recommends requesting the Number Administrator to report, by wireline and wireless, the quantity of codes carriers have returned since the jeopardy was declared in the 847 NPA. Staff recommends requesting wireline and wireless 847 code holders to report the quantity of codes they were assigned by the Number Administrator more than 90 days ago, but have not yet been activated, and explain the reason the codes are not activated. Finally, Staff recommends requesting wireline and wireless 847 code holders to report the quantity of codes they have returned to the Number Administrator since a jeopardy was declared in the 847 NPA.

- (5) For all newly assigned codes, carriers agree to administer the codes in blocks of one thousand numbers. A thousand block should be at least 90% full before numbers are utilized from additional thousand blocks unless a specific customer requirement for numbers cannot be satisfied from the thousand blocks already in use;

Status: No information is in the record of the area code docket to indicate the degree of compliance with this conservation measure. The June 19, 1998 Updated Report states that the number administrator has no capability to monitor compliance with this requirement.

NOTE: Staff recommends requesting wireline code holders to provide the information code holders provided to the Pooling Administrator regarding blocks they agreed to donate to the number pools. Staff also recommends requesting wireline code holders to report the quantity of thousand blocks code holders have in the 847 NPA with no numbers assigned and to report this information by rate center. Further, Staff recommends requesting wireline code holders to report the quantity of thousand blocks code holders have in the 847 NPA with 100 or fewer numbers assigned, and to report this information by rate center.

- (6) Carriers may not assign numbers from NXX codes requested for growth until at least 75% of the numbers in that carrier's existing NXX codes in a rate center have been utilized, except to satisfy a documented customer requirement based on technical limitations or the need for a consecutive block of numbers not available in the existing NXX codes. Notwithstanding this requirement, a carrier may request a code required for a special use (such as to identify a class of service with a unique billing arrangement) but may not request additional special use codes until its existing special use codes used for the same purpose are at least 75% utilized. An exception to the 75% fill rate requirement would apply where the applicant certifies to the number administrator that it will have a bona fide need to use numbers from a new NXX code for growth within 90 days, even though its existing NXX codes are not yet 75% utilized;

Status: No information is in the record of the area code docket to indicate the degree of compliance with this conservation measure. The May 29, 1998

Response states that industry has agreed to more stringent measures, 90 days to exhaust versus 75% fill, to implement this measure. In the June 19, 1998 Updated Report the Number Administrator states no assignment will be made unless the 90 day measure is met.

(7) A code holder would be required to refrain from assigning numbers from any thousand block in an NXX with 50 or fewer numbers currently in use until it had used at least 90% of the numbers in the other thousand blocks in that NXX;

Status: No information is in the record of the area code docket to indicate the degree of compliance with this conservation measure. The May 28, 1998 Response stated that most of the industry adopted this requirement over a year before the Order.

(8) A code holder would open only one thousand block at a time in an NXX and utilize 90% of those numbers before opening an additional thousand block;

Status: No information is in the record of the area code docket to indicate the degree of compliance with this conservation measure. Neither the Response nor Updated Report addressed compliance of the 90% utilization.

(9) An exception to (7) and (8) would apply if the code holder certified to the Number Administrator that it needed to open an additional thousand block (or request a new NXX code) in order to satisfy a bona fide request from a customer for a consecutive block of numbers that could not be satisfied in any other way. The numbers would have to be activated within six months, or any new NXX code assigned to meet this request would be reclaimed.

Status: No information is in the record of the area code docket to indicate the degree of compliance with this conservation measure. Neither the Response nor Updated Report addressed compliance with these exceptions.

While requirements 1-6 had been self-imposed by the carriers in the 847 area code as early as fall of last year, requirements 7-9 were proposed by CUB and Ameritech during the proceedings and subsequently adopted by the Commission in its Order. The Commission's Order was approved on May 11, 1998. Ameritech's first report on the imminent exhaust of the 847 NPA was filed on May 18 and was dated May 14, 1998 but was prepared from data collected before the order. Therefore Ameritech's projection of the exhaust of the 847 NPA was based on data gathered prior to the Commission's Order. Because of this, the data the Company used to reach their conclusions did not take into consideration whether carriers met requirements 7-9 as contained in the May 11 Order.

Staff notes that Ameritech in its May 29, 1998 response to the Emergency Motion of the intervenors, stated that their code administrator, after consultation with the Pooling

Administrator, will file a report on or before June 19, 1998, describing the early impacts of number pooling on 847 NPA exhaust. Ameritech also noted that prior to the June 19, 1998 report it is not useful to speculate on the effects of number pooling in the 847 NPA. The forecast in the June 19, 1998 report takes into consideration all of the code conservation measures ordered by this Commission. This is consistent with the May 11, 1998 Final Order requiring that a report be filed within 45 days.

The June 19, 1998 Updated Report has been filed and it states there is insufficient information to determine whether the operational date for the overlay can be extended beyond November 7, 1998 and strongly urges that the number administrator be permitted to move forward with implementation of the overlay back up plan. This will provide relief to the area code if the remaining identification and quantification of contaminated thousand blocks do not delay the exhaust.

## B. Staff Recommendation

Staff recommends, based on the premise that all outstanding pleadings filed in Dockets 97-0192/97-0211 have been denied, that the Commission initiate a docket for the purpose of investigating whether or not carriers are meeting the Commission ordered conservation measures.

Specifically, Staff recommends requesting the number administrator to report, by wireline and wireless, the quantity of codes the Number Administrator has recalled since the jeopardy was declared in the 847 NPA. Staff also recommends requesting the number administrator to report, by wireline and wireless, the quantity of codes carriers have returned since the jeopardy was declared in the 847 NPA. Staff recommends requesting wireline and wireless 847 code holders to report the quantity of codes they were assigned by the Number Administrator more than 90 days ago, but have not yet been activated, and explain the reason the codes are not activated. Finally, Staff recommends requesting wireline and wireless 847 code holders to report the quantity of codes they have returned to the Number Administrator since a jeopardy was declared in the 847 NPA.

Staff recommends requesting wireline code holders to provide the information code holders provided to the Pooling Administrator regarding blocks they agreed to donate to the number pools. Staff also recommends requesting wireline code holders to report the quantity of thousand blocks code holders have in the 847 NPA with no numbers assigned and to report this information by rate center. Further, Staff recommends requesting wireline code holders to report the quantity of thousand blocks code holders have in the 847 NPA with 100 or fewer numbers assigned, and to report this information by rate center.

## II. Irreversible Action

### A. Irreversible Action For The All Service Overlay Back-up Plan

Ameritech, in its role as Number Administrator identified the steps it had taken to ready the back-up plan in its May 12, 1998 Report. The point of the back-up plan is to have something that is as close to being immediately implemented as possible should the area code exhaust despite the best efforts of those involved in number pooling.

The NPA Code Relief Planning & Notification Guidelines state that "(a) minimum of 12 months advance notice of an NPA split/overlay should be provided by the NPA Relief Coordinator." In addition, the guidelines state "the North American Numbering Plan Administration . . . will provide 12 months advance notice to the industry via a Bellcore Information Letter."<sup>2</sup> This has also be referred to as the "World Planning Letter" in this docket and is the letter the current Number Administrator requested Lockheed Martin send out to industry "as soon as possible".<sup>3</sup> Finally they state, "(n)otification to the industry should appears six months prior to the NPA relief date in the Local Exchange Routing Guide . . . which is used for message and call setup routing."<sup>4</sup>

To implement the all services overlay back-up plan the Number Administrator necessarily must at some point, take irreversible action that will start the implementation. That irreversible action has not been specifically identified and described. Therefore the time of the irreversible action cannot be identified.

#### B. All Services Overlay Implementation Date

The Commission's Order in this docket stated that the Number Administrator should set implementation of the new NPA "as far in the future as possible". The industry team's decision to begin implementation on November, 7 1998, may not comport with the language of the Commission's Order. The industry team instituted a system of rationing where only 5 NXX codes would be distributed per month regardless of the number of NXX code requests received by the Number Administrator. Based on the Number Administrator's indication of the remaining NXX codes, in both the first report and the updated report, November 7, 1997 may prove to be the correct date.

However, at least 36 codes are being held in a reserve status due to an FCC rule.<sup>5</sup> It is possible that all or only a portion of those codes will be taken by the new carriers. Therefore, it is possible that some percentage of the 36 codes will become, ninety days prior to the overlay NPA implementation date, assignable to current carriers. Ameritech has stated in its June 19 Report that it is not possible to know how many codes must be reserved for new entrants until the deadline 90 days before implementation. Therefore, it

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<sup>2</sup> NPA Code Relief Planning & Notification Guidelines, INC970-0404-016, Issued 4/4/97, page 10.

<sup>3</sup> Report of the Number Administrator to the ICC on the forecasted exhaust of the 847 NPA filed May 14, 1998.

<sup>4</sup> NPA Code Relief Planning & Notification Guidelines, INC970-0404-016, Issued 4/4/97, page 15.

<sup>5</sup> FCC 96-333 Second Report and Order and Memorandum Opinion and Order, para. 286 & 288 - 289. The rule requires that each certificated carrier have at least one NXX available to it from the existing NPA up to 90 days before the implementation of the new overlay NPA.

may be possible that the implementation date of the overlay NPA could be extended to January 23, 1999, a second date discussed by the industry team at their recent meetings.

### C. Staff Recommendation

Staff recommends the Number Administrator specifically identify the irreversible action that will start the implementation and explain the reasons the action is irreversible. Staff also recommends the Number Administrator explain how the date of the irreversible action can be determined.

## III. Area Code Relief

### A. ICC Area Code Relief History

For nearly 40 years Chicago along with its surrounding suburbs was served by the 312 area code. In 1989, there was a geographic split assigning new NPA 708 to the suburbs. In 1995, the Commission addressed area code exhaust, this time of the 708 NPA. (See ICC Docket 94-0315, Order, March 20, 1995) The Number Administrator originally proposed an overlay for wireless devices only. Following the FCC's rejection of a proposed wireless/technology-specific overlay (IAD File No. 94-102 Declaratory Ruling and Order, 10 FCC Rcd 4596 (1995)), the Commission ordered a three-way geographic split of the 708 area (ICC Docket 94-0315). The 708 geographic area was split into the 708, 847, and 630 NPAs. The industry projected this plan to last at least until the year 2004, when the affected area codes would again require relief. The first split, between 708 and 847, was implemented in January 1996 with the north and northwest suburbs receiving the new 847 NPA. The second between 708 and 630 was implemented in August 1996 with the west suburbs receiving the new 630 NPA. In November of 1995, the Commission (docket 95-0371 Order issued November 20, 1995) approved relief for the 312 NPA splitting it into the 773 and 312 NPAs. In this docket, another wireless-specific overlay was proposed but not approved by the Commission. With this split the 312 NPA was projected to last until after 2000. 773 was projected to last several years longer. Within little more than two years, Chicago area customers have seen the introduction of three new area codes. Exhaust of the 847 NPA, forecast to be the first of 1998 when this docket began, would give Chicago its sixth area code long before original projections.

Following is a timeline of the area code history:

1947	Creation of North American Numbering Plan / 312 NPA for Chicago
1989	312/708 Geographic split is implemented
July 1994	Notice of impending 708 exhaust
February 1995	FCC rejection of the proposed wireless overlay
March 1995	ICC Orders three way 708/630/847 geographic split
August 1995	Notice of impending 312 exhaust
November 1995	ICC approves stipulation for 312/773 geographic split
January 1996	708/847 split is implemented



August 1996	708/630 split is implemented
October 1996	312/773 split is implemented
May 1997	Notice of impending 847 exhaust
May 1997	CUB files petition on number pooling
May 1998	Commission issues Order on number pooling and 847 NPA relief

## B. FCC vs. States' Role in Area Code Relief

While numbering administration matters have generally been under the primary jurisdiction of the FCC, the FCC recognized that states have concurrent jurisdiction and "are uniquely situated to determine what type of area code relief is best suited to local circumstances and should continue to oversee the process."<sup>6</sup> However, the FCC did clarify some guidelines regarding numbering administration that apply equally to area code relief in its Second Report and Memorandum Opinion and Order in FCC 96-333. The FCC stated "that numbering administration should: (1) seek to facilitate entry into the communications marketplace by making numbering resources available in an efficient and timely basis; (2) not unduly favor or disadvantage any particular industry segment or group of consumers; and (3) not unduly favor one technology over another."<sup>7</sup> Implicit within these guidelines is the FCC's decision that all services overlays may not be technology specific, and must include mandatory 10-digit dialing throughout the affected area. Another FCC requirement with the implementation of an overlay is that all carriers have available to them at least one NXX code from the existing NPA 90 days before the introduction of the new area code.

While the FCC has promulgated rules, the states continue to carry the burden of approving and implementing NPA relief plans. The number administrator and the industry present their relief plans to the ICC. The ICC then holds a series of public hearings to garner public opinion regarding the alternative plans. When there has been a difference of opinion on the manner and/or method of NPA relief plan to implement, the ICC has also held hearings and taken testimony in order to build a record of evidence so that it may make the final decision on which plan to adopt.

## C. ICC Local Number Portability (LNP) History

LNP, the ability of a customer to change local exchange carriers without having to change phone numbers, was identified early on by the ICC as an issue critical to the development of competition. It subsequently proved to be the foundation for addressing the need to conserve numbers through number pooling. Following is a history. The ICC first addressed the issue of permanent LNP in its, April 7, 1995, Customers First Order. (ICC Docket 94-0096/94-0117/94-0146/94-0301 Consolidated, pages 102 - 110) In that order the Commission stated,

<sup>6</sup> Second Report and Memorandum Opinion and Order, FCC 96-333, para 283.

<sup>7</sup> Second Report and Memorandum Opinion and Order, FCC 96-333, para 281.

"number portability is an increasingly critical issue for the continued development of competition in local exchange markets. The lack of adequate number portability can be a considerable deterrent to any customer contemplating a switch in local carriers, and can impose significant costs on those customer who do switch."

The Commission adopted Staff's recommendation to create an industry task force to develop a solution to permanent LNP. The Commission believed "the issue [was] no longer whether - but when and how - to implement number portability in Illinois."

The Illinois LNP Task Force (Task Force) established a goal to develop, evaluate, and recommend a wireline service provider number portability (SPNP) solution and to propose an implementation plan for the Chicago MSA. The solution had to meet a number of selection criteria set forth by the Task Force:

- a) Minimum increase in call setup delay
- b) Existing features should be unaffected
- c) Operator assisted and coin calls must work properly
- d) Ported calling card numbers must be validated
- e) 911 calls must function properly
- f) Calls to ported numbers must be rated properly
- g) Must be migratable to location and service portability
- h) Should conserve numbering resources
- i) Available to all wireline customers within selected area
- j) No number change required
- k) Database query possible from originating, intermediate, or terminating switch
- l) Incumbent LEC not essential for call completion
- m) Interface with non-LNP capable networks
- n) Database response provides sufficient information for unambiguous routing to terminating switch

These criteria were later used as the foundation for the FCC's selection criteria adopted in the FCC's First Report and Order and Further Notice of Proposed Rulemaking in CC Docket No. 95-116, released July 2, 1996.

The Task Force Co-chaired by Ameritech, AT&T, MCI and ICC Staff, then formed a number of subcommittees, each centering on a certain area of expertise. The Subcommittees, named for their areas of expertise, are Operations, Switching, Rating & Billing, Operator Services, Service Control Point (SCP), and Cost Recovery. Separate Number Portability Administration Center (NPAC), 911, LLC/Legal, Law Enforcement, Number Pooling, and Number Pooling Guidelines teams and subcommittees arose later to address specific issues regarding the work products and recommendations of the original 6 Subcommittees and the Task Force.

The Task Force and the various committees evaluated a number of LNP methods and settled on the Location Routing Number (LRN) method developed by AT&T. The LRN LNP method later became the national standard and was approved by the FCC. The Task Force and its committees also developed the standards necessary to implement LRN LNP. Among those standards were the following:

- a) Switching & Signaling Requirements
- b) Rating & Billing standards
- c) Operations Process Flows
- d) SCP Requirements
- e) Operator Services Switching Requirements
- f) NPAC Interoperable Interface Specifications
- g) NPAC External Design Specifications
- h) NPAC Functional Requirement Specifications
- i) NPAC Methods & Procedures Document
- j) 911/E911 Recommended Standards for LNP

These developments by the Task Force were the initial groundwork and the technical and administrative structure atop the groundwork for the eventual implementation of LNP. Each document was, in large part, accepted as either a national standard or the baseline for the national standard for LNP.

The FCC, in its First Report and Order and Further Notice of Proposed Rulemaking in CC Docket No. 95-116 required the members of the Illinois LNP Task Force to undertake a test of the LRN LNP model in the Chicago MSA. Following the test, the Task Force was to file a report on the results by September 31, 1997. The Task Force had already planned a test and work was underway in developing a comprehensive LNP Test Plan. The LNP Test Plan developed by the Task Force was the genesis of the nationwide standard test plan.

Several months prior to the FCC mandated LNP Field test, members of the Illinois LNP Task Force began testing their own systems in a lab environment so they could address any need for further development before connecting with the Lockheed Martin NPAC. Following successful intracarrier testing was a round of testing directly with the NPAC. Once each carrier was able to prove that their systems worked successfully with the NPAC, that carrier was "NPAC certified" and moved on to intercarrier testing. The intercarrier testing was used to work out system bugs prior to the Field Test. One of the major issues in these last two rounds of testing was carrier associations, or their ability to remain logically connected to the NPAC database in order to receive all the requisite number porting information for call routing.

The LNP Field Test began on August 11, 1997 and came to a successful conclusion on September 26, 1997. The FCC Field Test was designed to emulate the live network, using live phone numbers and existing carrier switches and other systems. It included hundreds of testing scenarios meant to simulate the many different call possibilities that would come

about in a live network. For example, calls were sent from ported numbers to calling card numbers and vice versa. The failure of the Chicago NPAC database was tested, as was its ability to switch over to the back-up database in Tarrytown, NY. The addition of a new carrier entering the marketplace that lacked any of the historical number porting information was tested. Also, the ability of 911 to handle information on ported numbers along with the proper functioning of services like caller ID and automatic call back were tested.

The FCC Field Test included three rounds of porting. In the first round, numbers were ported from one carrier to a second. This marked the first time numbers were ported using the LRN methodology in a live network. Next, the numbers were then ported to third a carrier. Finally, the numbers were returned (snapped back) from the third carrier to the original carrier. Snap-back is integral to porting. It is the process whereby numbers that have been ported are disconnected and subsequently returned to the original carrier. Without snap-back the possibility exists for numbers to get "lost" within the system, a waste of valuable numbering resources. The completion of the third round signaled the successful completion of the Field Test.

During the Field Test, weekly update test reports were compiled by the testers, edited by a lead tester and Commission Staff and forwarded to the Staff of the FCC's Common Carrier Bureau. On October 17, 1997 the Illinois LNP Task Force filed with the FCC and ICC a report detailing the successful efforts of the Task Force during the LNP Field Test. The report allowed LRN LNP to clear the final technical hurdles on the way to implementation.

#### D. ICC Number Pooling History

In January of 1997, Commission Staff requested that the Task Force begin addressing number conservation issues. In March 1997, the issue of number conservation was assigned to the new Phase II subcommittee. The Phase II subcommittee scheduled presentations of number conservation proposals in May 1997. At the May meeting both the Citizens Utility Board (CUB) and AT&T presented a proposal dependent on the implementation of LRN LNP called NXX-X\LRN. NXX-X\LRN is now commonly referred to as number pooling, or more accurately, thousand block number pooling. It is the subject of CUB's petition in Docket 97-0192. Later that month, the Task Force set up a separate Number Pooling Subcommittee to development requirements around the thousand block number pooling proposal.

Thousand block number pooling, is more efficient -- for LRN LNP capable carriers -- than the current practice of assigning numbers in blocks of 10,000, a nationwide, decades old practice seemingly outdated by the advent of numerous local exchange carriers within the same market. The Number Pooling Subcommittee, working in concert with the Operations, NPAC, SCP, and Number Pooling Guidelines Teams evaluated the different methods by which to accomplish thousand block number pooling.

Concurrently, Commission Staff began collecting carrier data on the number of uncontaminated<sup>8</sup> thousand blocks and those with less than 5% contamination. Commission Staff sent to code holders in the 847 area code a series of data requests that were designed by the members of the Number Pooling Subcommittee to forecast the length of time thousand block number pooling might extend the life of the 847 area code. The results were included in a September 1997 report filed by the Number Pooling Subcommittee. The report, addressed the technical challenges of implementing thousand block number pooling concluding that it could technically be accomplished. The report further laid out a road map of the work that needed to be accomplished before number pooling could be implemented. Among these items were:

- a) Request For Proposals for Pooling Administrator - Issued November 1997
- b) Selection of Pooling Administrator - Lockheed Martin Selected January 1998
- c) Finalize Pooling Process Flows - February, 1998
- d) Finalize NPAC changes - February 1998
- e) Finalize Pooling Administration Guidelines - May 1998
- f) Draft Test Plan - May 1998

These various administrative documents comprised a comprehensive set of rules by which thousand block number pooling would be governed. Other crucial hurdles to moving forward with the trial of number pooling in the 847 NPA were:

- a) Approval of Software Release 1.4 - May 1998
- b) Stipulation of Pooling Administrator Lockheed Martin - Agreed to May 1998
- c) Number Pooling Paper Process Test - Began May 1998
- d) Number Pooling Trial - Begins June 1998

The software release 1.4 will allow carriers to move from a manual pooling mode to a mechanized mode.<sup>9</sup> One of the requirements of Lockheed Martin's bid to be Pooling Administrator was that the members of the LLC agree to a stipulation selecting them as the pooling administrator. Lockheed Martin would not have moved forward with the Trial on June 1 without this. The Process Test began on May 18. It is essentially a test of the paper processes a carrier must complete in order to request and receive a thousand block. June 1, 1998 was slated by the Number Pooling Subcommittee as the start date for the 847 thousand block number pooling trial. In fact, if a carrier had requested a block of one-thousand numbers from the pooling administrator today, the pooling administrator could work to meet that request even though it has not yet received all of the data it truly needs.

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<sup>8</sup> Blocks of one thousand numbers wherein all numbers are available for assignment.

<sup>9</sup> In order to expedite the 847 pooling trial carriers agreed to begin the trial in a manual mode, but believed they could only continue operating in the manual mode for 3-4 months. For this reason, a new software release, 1.4, was required to allow them to bridge to a mechanized mode within 3-4 months of the trial start date. Pooling could not have moved forward without the May approval of the 1.4 software release, making the release available near the end of August.

Each and every one of the aforementioned accomplishments was a necessary step on the road to a trial of thousand block number pooling beginning on June 1, 1998. Commission Staff has acted as a Co-Chair of the Task Force, and has been a contributing member on each of the individual subcommittees since The Task Force was first formed in 1995. With this experience, Commission Staff can state that it is unlikely that number pooling could have been implemented any sooner than June 1, 1998. While the ability to port numbers exists in a number of cities nationwide, the ability to implement number pooling currently exists only for the Chicago area, and more specifically the 847 NPA. No other area in the country has yet reached this point in the process.

#### E. Progress Of Number Pooling

Number pooling allows carriers to share thousand blocks from the same NXX within the same rate center. The 847 NPA has 42 different rate centers. Each rate center must have a pool of thousand blocks for carriers to use, otherwise, an entire NXX code must be requested from the Number Administrator to replenish the pool. NPA exhaust occurs when all NXXs from the existing NPA have been assigned to carriers/rate centers. In order for number pooling to be truly successful in extending the life of the NPA, carrier give back of numbering resources is necessary to ensure that all rate centers have sufficient number pools. Lockheed Martin, as the Pooling Administrator, has requested all 847 wireline carriers to identify the thousand blocks they are willing to give back to the pools. Lockheed is collecting that proprietary information and will aggregate it so that carriers can see the size of the pool in each rate center. From this we will be able to tell if there are insufficient resources within a rate center thereby forcing the Pooling Administrator to request a new NXX from the Number Administrator.

The success of number pooling relies, to a certain extent, on the voluntary efforts of carriers to donate blocks of numbers to the number pool, possibly to be used by other competitors. As Ameritech stated in its reply, Lockheed Martin, the Pooling Administrator, is in the process of gathering forecast and block donation information from the 847 wireline carriers. Lockheed Martin has released the preliminary results of its data requests which reflect a great disparity in the number of blocks donated for the 847 trial as compared to the number of blocks that were identified with Staff's data requests sent out from May to July of last year. The most recent preliminary numbers from the pooling administrator indicate a total of 299 uncontaminated thousand blocks<sup>10</sup> being donated to the 847 NPA pools. 12 rate centers have no blocks at all. The Pooling Administrator's numbers forecast the need for 22 new NXX codes in 1998 just to replenish the 847 rate center pools. These NXX codes would be taken directly from the Number Administrator's already low inventory.

Results of the Staff data request from May 1997 indicated a total of 671 uncontaminated thousand blocks in the 847 NPA. Results of a follow up data request from

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<sup>10</sup> An uncontaminated thousand block is one in which all numbers are available for assignment, No numbers have been used for any purpose from the block.

last July indicated a total of 590 free thousand blocks in the 847 NPA of which carriers committed to donating 348 to the 847 NPA pools upon the start of pooling.

One should be cautious in simply reading the numbers. There is more information yet to be known about the most current give-back numbers from the Pooling Administrator. First, the Pooling Administrator must have all information from all carriers in order to provide final thousand block donation numbers. Second, and perhaps most important, Staff must have information from all carriers so that a comparison may be drawn between the number of uncontaminated thousand blocks available and the number actually donated to the 847 NPA pools. From this information, Staff will be able to gauge carrier participation in pooling.

The results of the current data request on the 847 NPA pools released by the pooling administrator included uncontaminated thousand blocks only. The Pooling Administrator has requested data on contaminated thousand blocks donations. The request for contaminated numbers had not previously been made because until the software release 1.4 discussed in this document is installed and tested by all providers -- projected as of October 16, 1998 providing for carrier mechanization of number pooling, -- it was not believed that contaminated thousand blocks could be used. Carriers have now agreed that contaminated thousand blocks can be used before the mechanized process is ready in October, even though there are some relatively minor problems associated with this that must be worked out. The current date for the start of using contaminated thousand blocks is July 15, 1998. The results from the data request on contaminated thousand blocks should be available around July 8. It is possible that a great many of the thousand blocks in the 847 NPA first reported by Staff as being uncontaminated, may have since been contaminated, meaning they would not show up in the Pooling Administrator's first round of data request results but will in the second.

One should be cautious in making any decisions based on the Pooling Administrator's preliminary numbers. The July 8, 1998 results will update the current information.

It is possible that some carriers may feel compelled to protect a valuable numbering resource and have unnecessarily limited their donations to the pool. While the Order required all wireline carriers to participate in number pooling it did not address the extent of the carriers' participation in that it did not order carriers to give back all available resources.

If carriers fail to give back blocks of numbers to the pool then the Pooling Administrator will be forced to request new NXX codes from the Number Administrator to fulfill its thousand block requests. Instead of allowing number pooling to take advantage of currently available numbering resources, new resources will need to be assigned thereby accelerating the exhaust of the remaining 847 NXXs and thus the area code. Upon the initiation of a new docket Staff would issue a data request to all wireline 847 NPA NXX holders requesting they provide Staff with the same information they have provided to the Pooling Administrator. Staff would further request that carriers forward to Staff their

thousand block utilization data so that Staff may compare what a carrier actually has to what they have agreed to return to the pools.

Regardless of the numerous questions surrounding the number of thousand blocks returned to the pool, Lockheed Martin, as the Pooling Administrator, has been prepared since June 1, 1998 to assign thousand blocks to carriers. To date, five of the thousand blocks have been requested and assigned but none have been activated.

#### F. National Numbering Efforts

ICC Staff has also played a prominent role in national numbering forums, such as the various task forces under the North American Numbering Council (NANC). In fact, NANC, at the direction of the FCC recently formed a new working group to address numbering issues such as number pooling. The Numbering Resources Optimization Working Group (NRO) is chartered by the NANC to draft a report due to the FCC by September 23, 1998 making recommendations on federal policy for a collection of numbering issues. The NRO is made up of three task forces: 1) The Individual Telephone Number Pooling Task Force (ITN); 2) Analysis Task Force (ATF); and 3) the State Issues Task Force. ICC Staff sits as Co-Chair of the State Issues Task Force and is a contributing member to the other two task forces and the NRO. The NRO and its three task forces will have a great deal of influence on national policy for many state affecting numbering issues. The ICC and its Staff are not only addressing and moving forward on issues at the local level, but are addressing them at the national level as well.

Many of the national numbering efforts have been convened to address the heightened concerns with NPA exhaust and relief. After living with no more than two area codes (312 and 708) since the introduction of the modern dialing system, the Chicago area has endured the addition of three new area codes (773, 847, and 630) since 1995. This situation is not unique to the Chicago area. Prior to 1995, the number of new area codes added across the country per year was approximately 3 to 4. In 1995, the number shot up to approximately 30 per year. In 1997, according to the Central Office Code Utilization Survey (COCUS) 30 new area codes were introduced. Further, the 1998 COCUS shows 23 area codes exhausting nationwide in 1998. Another 23 are currently projected to exhaust in 1999. Area Code exhaust is something challenging the entire country.

While the FCC has begun work on the issue, it is not clear whether number pooling is solely within the federal jurisdiction as is general numbering administration.

In the area of numbering, the ICC's history has been a very proactive approach in its encouragement and development of capabilities like LNP and number pooling. The future of area code exhaust in Chicago and throughout the nation is directly connected to the past efforts of the ICC in these two areas. Local Number Portability makes number pooling possible and it in turn makes the Commission ordered conservation measures possible.



#### IV. Summary of Staff Recommendations

##### A. Conservation Measures Compliance

Staff recommends the Commission initiate an immediate investigation, for the purpose of ensuring that all companies, subject to the order in dockets 97-0192/97-0211, are complying with the conservation measures of the Order. Staff also recommends that the Number Administrator and all telecommunications carriers holding 847 codes be named as respondents in the investigation.

##### B. Irreversible Action

Staff also recommends that the Commission investigate to specifically identify the irreversible action that will start the implementation, learn the reasons the action is irreversible and learn how the date of the irreversible action can be determined.

## APPENDIX A

Definitions: For this report the following definitions will be used;

Give-back - (donation) The return of thousand blocks to the pooling administrator for use in filling the number pools.

Local Number Portability (LNP) - the ability of a customer to change local exchange carriers without having to change phone numbers.

LRN LNP – Location routing number local number portability is a database method of LNP that allows carriers to route calls sharing the same NXX to different carriers. It is the basis of number pooling.

NXX - Also known as Code or prefix. This is a group of 10,000 numbers assigned to a carrier by the number administrator. Example: NPA-NXX-XXXX is the telephone number format for 312-555-XXXX and includes all the numbers from 0000 to 9999. The prefix, or NXX, is 555.

NXX-X - Also known as thousand block or block. This is block of 1,000 numbers assigned to a carrier by the pooling administrator. Example: 312-555-1XXX and includes all the numbers from 1000 to 1999.

Number administrator – The number administrator (Ameritech) assigns NXX codes to all carriers according to the Central Office Code guidelines.

Number Plan Area (NPA) - Another term for area code. Example: 312-555-XXXX. The NPA, or area code, is 312.

Number Pool - The total of all the thousand blocks available for assignment within a specific rate center by the Pooling Administrator.

Number Pooling – The ability to share NXXs within the same rate center between multiple carriers serving that rate center using LRN LNP for call routing.

Pooling Administrator – The pooling administrator (Lockheed Martin) assigns NXX-Xs to LNP capable wireline carriers.

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7 Area Code Mailing List - July 1997

Aerial Communications  
Bryan Jones  
8410 West Bryn Mawr  
Chicago, IL 60631

Ameritech  
Brian Baldwin  
200 West Ameritech Center Drive  
Hoffman Estates, IL 60196

Airfree Paging  
Joseph Barnes  
3600 West Irving Park Road  
Chicago, IL 60618

Airtouch Paging  
Sam Carter  
1600 Golf Road, Suite 100  
Rolling Meadows, IL 60008

American Paging  
Stan Henderson  
800 Enterprise Drive, Suite 107  
Oak Brook Terrace, IL 60521

Ameritech  
Brad Ostendorf  
311 West Washington, Floor 9W  
Chicago, IL 60606

Ameritech Cellular  
Jef Leary  
1515 Woodfield Rd., Suite 1400  
Schaumburg, IL 60173

AT&T  
Sandy Funness  
1 Oakway, Rm. 2WB107  
Berkeley Heights, NJ 07922-2772

AT&T Wireless  
Wendy Cohan  
227 West Monroe, Suite 5050  
Chicago, IL 60606

Becker Beeper  
Tony Goodman  
2000 East Algonquin Road  
Schaumburg, IL 60173

Beeper Mart  
Thomas Manthei  
5435 Emerson Way  
Indianapolis, IN 46226

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Cellular One  
Dennis Muncy  
306 West Church  
Champaign, IL 61820

Cellular Paging USA  
Tracy Chapron  
1580 Centinela Avenue  
Inglewood, CA 90302

Consolidated Communications  
Steve VanValin  
540 Maryville Center Drive  
St. Louis, IL 63141

Focal Communications  
Sarah Berthelsen  
200 N. LaSalle Street  
Chicago, IL 60601

Geotek Communications  
Steve Senak  
20 Craig Road  
Montvale, NJ 07645

Heartland Communications  
Tony Czech  
4032 N. Nashville Ave.  
Chicago, IL 60634

LCI International  
Pam Melton  
8180 Greensboro Dr., Suite 800  
McLean, VA 22102

Map Mobile  
Rebecca Sullivan  
840 Green Briar Circle  
Chesapeake, VA 23320

MCI  
Frederick C. Williams  
2270 Lakeside Blvd.  
Richardson, TX 75082

MFS WorldCom  
Pamela Kenworthy  
3 Wing Dr., Suite 200  
Cedar Knolls, NJ 07927

Mobile Communications  
Joe Pontec  
1336 Basswood Road  
Schaumburg, IL 60173

Multi Computer Systems, Inc.  
Bob Lyons  
817 S. Kay, Unit 3  
Addison, IL 60101

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Nextel  
Scott Kovach  
2301 W. 22<sup>nd</sup> Street  
Oakbrook, IL 60521

Page America  
Ed Gordon  
1919 South Highland Ave., Suite 2120  
Lombard, IL 60148

PageMart  
Tom Moroney  
6688 North Central Expressway  
Dallas, TX 75206

PageNet  
Bill Wilmington  
4985 Preston Park Blvd., Suite 6700  
Plano, TX 75093

Paging USA  
Steve Shirk  
932 W. Mound Street  
Columbus, OH 43223

PCS Primeco  
Greg Polk  
1 Pierce Place, Suite 1100  
Westchester, IL 60154-5806

SBMS Illinois Services, Inc.  
Dennis Muncy  
306 West Church  
Champaign, IL 61820

Source One Wireless  
Ken Pawlowski  
600 South Federal  
Chicago, IL 60605

Sprint PCS  
Victor Koth  
5600 River Road, Suite 500  
Rosemont, IL 60018

Sprint/Centel  
Les Kleinrichert  
1404 Park Avenue West  
Mansfield, OH 44906

TCI  
Fred Gamble  
3030 Salt Creek Lane  
Arlington Heights, IL 60005

Teleport  
Verne Silger  
233 S. Wacker, Suite 2100  
Chicago, IL 60606

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TSR Paging  
John Ratini  
5623 West Touhy  
Niles, IL 60714

U.S.N. Communications, Inc.  
Ray Shinadeh  
5400 LBJ Freeway  
Dallas, TX 75240

Winstar Communications  
Daniel Gonos  
6978 Cedar Brook  
Bloomfield Hills, MI 48301

APPENDIX C. Page 1.  
III. Staff's Proposed Questions

A. Number Conservation

1) Illinois Bell Telephone Company d/b/a Ameritech Illinois, as Number Administrator:

Report, by wireline and wireless, the quantity of codes that the Number Administrator has recalled since the jeopardy was declared in the 847 NPA by the Number Administrator on November 3, 1997.

Report, by wireline and wireless, the quantity of codes that telecommunications carriers have returned since the jeopardy was declared in the 847 NPA by the Number Administrator on November 3, 1997.

2) All telecommunications carriers holding 847 Codes

Report, by wireline and wireless, the quantity of codes that were assigned by the Number Administrator prior to April 1, 1998 that have not yet been activated.

Explain the reasons those codes in that have been listed in response to Number 3 above are not yet activated.

Report, by wireline and wireless, the quantify of codes that have been returned to the Number Administrator since a jeopardy was declared in the 847 NPA.

B. Telecommunications Carriers that are Wireline Code Holders

Provide the information that was provided to the Pooling Administrator regarding blocks that you agreed to donate to the number pools.

Report, by rate center, the quantity of thousand blocks you have in the 847 NPA with no numbers assigned.

Report, by rate center, the quantity of thousand blocks you have in the 847 NPA with 100 or fewer numbers assigned.

C. Irreversible Action

1) Illinois Bell Telephone Company d/b/a Ameritech Illinois, as Number Administrator:

Specifically identify the irreversible action that will start the implementation of the and supply the reasons that the action is irreversible.

Describe how the date of the irreversible action can be determined.

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IV. Staff's Proposed Schedule

Monday, June 29, 1998	Order Issued, parties served with discovery.
Wednesday, 8	Responses to data requests due to Staff
Monday, July 13	File Direct testimony
Wednesday, 15	File Rebuttal testimony
Friday, 17	Evidentiary Hearings
Tuesday, 21	File Initial briefs
Thursday, 24	File Reply briefs
Monday, July 27	Proposed Order
Wednesday, 29	Exceptions
Friday, 31	Replies
Tuesday, 4	Post Exceptions Proposed Order
Monday, August 10	Commission considers Interim or Final Order